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March 1978

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MONTANA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCES

Monthly Report of Activities
of the Air Quality Bureau

March, 1978

STATE DOCUMENTS COLLECTION

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1. Highlights:

Experimental open burning period was begun in Flathead County, as agreed to in June, 1977. 191 permits were issued the first day of the period. An average of over 100 per day during the last week of March have been issued.

2. Ambient Air Quality Network:

a. Standards Exceeded:

SO_2 violations:	Microwave	East Station	Broudy
State 1-hour	0	2	0
State 24-hour	0	0	0
Federal 3-hour	0	0	0
Federal 24-hour	0	0	0

SO_2 violations from Company Stations near Anaconda smelter

State 1-hour	22
State 24-hour	6
Federal 24-hour	3
Federal 3-hour	1

ASARCO, Inc., Kennedy Park, 0200-0500 hours, - 0.55 ppm

Stations in Butte and Anaconda	C-Hill	P.O.	Hwy. Jct.	Mill Creek
# of excur. SO_2 over 0.25 ppm	-	8	58	28
Highest reading, 1-hr average, ppm	-	0.95	2.00	1.04
Highest 24-hour average, ppm	-	0.11	0.57	0.29

	Highest 1-hr, ppm	Highest 24-hr, ppm
CO, Alpine West	8.0	4.2
Hydrocarbons, Hebgen Park	1.45	2.8

b. Air Stagnation Advisories: None in March

c. Laboratory Status:

Total samples for month	338
Total determinations for month	406

d. Developments:

Two new chemists were hired to work on the Montana Air Pollution Study (MAPS)

3. Permits and Tax Credits:

a. Permits Applied For

Long Construction Co., Lake County, portable hot mix asphalt plant
Laslovich Contracting, Deer Lodge Co., jaw crusher, screens and bolts
Jim Gilman Excavating, Inc., Silver Bow Co., portable hot mix asphalt plant
Halliburton Services, East of Malta, storage tanks, elevator and conveyer for sand handling plant

Permits Approved

The Anaconda Company, Anaconda, double contact sulfuric acid plant
Laslovich Contracting, Deer Lodge Co., jaw crusher, screens and bolts

b. Operating Permits - None

c. Tax Credit

A request from The Anaconda Company for their acid plant expansion was approved.

Anaconda Aluminum and Louisiana Pacific tax certification applications still are under review.

4. Variance Status:

a. Current

Anaconda Aluminum Company, Columbia Falls, F^- and particulate, expires June 30, 1978. Renewal application received.

SO_2 variance for The Anaconda Company was renewed in December and expires June 30, 1978.

The Anaconda Company variance from visible emissions and process weight rules for the foundry expires June 30, 1978.

ASARCO, Inc., 90-day extension from Stipulation granted for acid plant shakedown period. Expires May 1, 1978.

b. New - None in March

5. Enforcement Actions:

a. Citations

Dick Kelley, 4729 N. Montana, Helena, open burning without a permit.

b. Notice of Violation: None

c. Orders to Take Corrective Action: None

5. Enforcement Actions, Cont.

d. Court Actions

Lincoln County has appealed the District Court decision that the open burning rule (16-2.14(1)-S1490) is valid. The Supreme Court should make a decision by this fall.

6. Tepee Burners and Open Burning:

Tepee Burner Status:

No. at start	41
New starts	0
Shutdowns	0
No. at end	41

Burning Permits Issued:

Cascade County	3	Missoula County	773
Lake County	143	Yellowstone County	326
Sanders County	60	Rest of State	1705
Kalispell Office	400	State Total	3345

7. Source Tests Performed:

a. Agency Source Tests - None

b. Non-Agency Source Tests

Hoerner-Waldorf, Missoula, 17 particulate tests on recovery boilers, lime kilns, smelt tanks, hogged fuel boiler

8. Field Investigations:

Anaconda Aluminum, Columbia Falls, smelter, EPA audit inspection, in compliance and on schedule
Plum Creek Lumber, Columbia Falls, sawmill and plywood plant, EPA audit inspection, in compliance
St. Regis Paper, Libby, mill and boiler, in compliance
U. S. Gypsum, Billings, EPA audit inspection
Montana Sulphur and Chemical, Billings, audit inspection by EPA
Peavey Company, Billings, EPA audit inspection
Hot Springs, open dump, burning, investigation
Flodin Lumber, Thompson Falls, tepee burner documentation, in compliance
Thompson Falls Lumber, tepee burner/boiler documentation, in compliance
Walters Brothers Mill, Thompson Falls, tepee burner inspection, not in operation
R & R Industries, Thompson Falls, slash burning
Louisiana Pacific, Trout Creek, conference regarding wood-fired boiler
Weatherford Funeral Home, Kalispell, documentation, no violation
Plum Creek MDF, Columbia Falls, conference regarding fallout-wood fiber
City of Kalispell, new city hall building site, dust control practice
Flathead County landfill, inspection of woodwaste area
Brand S Lumber, Livingston, tepee burner
Willow Creek Lumber, Livingston, tepee burner

8. Field Investigations, Cont.

Kanta Products, Three Forks, kiln, inspection
Ideal Cement, Trident, inspection
Leslie Elford, Helena Valley, potter kiln, letter of reprimand
Super Save, North Montana Avenue, Helena, incinerator

9. Complaints:

ASARCO, East Helena, damage to trees in Montana City, investigation (two complaints)
Sorenson Brothers, Drummond, excessive particulate emissions, investigation
Brand S, Livingston, fallout, will follow-up
Euclid Avenue, Helena, dust, Highway Dept. will clean up
Broadway Avenue, Helena, dust, city street dept. contacted
Super Save, Helena, incinerator smoking, investigation
I. W. Pierce, Deer Lodge, odor from horses, complainant contacted
Great Western Sugar, Billings, odor from ponds, investigation (two complaints)
MDF plant, Kalispell, fallout, conference held for proposed updating of emission devices
JY Development, East Helena, open burning, letter of reprimand

10. Data Processing Services:

a. Ambient Data Summary: See attached

b. Emission Inventory Status: No updates received or processed

c. Prevention of Significant Deterioration

Met with Burns and McDonnell Corporation to discuss present status of PSD in Eastern Montana. The corporation is doing a siting inventory study.

Met with Clint Carlson, USFS, in Missoula, on classification of primitive areas with respect to PSD.

d. Modeling:

Put effort into using Hiway model for Billings Fairground problem intersection. Attempting to modify Hiway model program to reduce data copying time and hand calculations.

11. Environmental Impact Statements:

a. Agency Impact Determinations - None in March

b. Other Agency EIS's Reviewed - None in March

12. Status of Studies, Contracts and Reports:

Billings Coal TSP - PEDCo continuing work on CO Hiway model and TSP AQDM model

12. Status of Studies, Contracts and Reports, Cont.

Poplar River Final Report being written, Grant for FY 78 has been received
Quality Assurance - wrote plan for MONTCO/Nance Mine for hi-vol sampling
ASARCO-Troy 92% complete, EIS delayed and contract extension will be requested to continue sampling
Rockwell International contract proposal to evaluate Anaconda's in-stack instruments will be updated soon.
EPA study of Anaconda's baghouse efficiency and helicopter sampling program should be released in April
MAPS Project - all phases are in operation, project completion date is June 30, 1979
MAPS - Clinical Record Review portion of the Mortality Study should begin in early April. EPA is sending revised draft of home-interview form.
MAPS Update and Improvement of the Emission Inventory, signed contract with Midwest Research Institute

13. Schools and Training:

Attended EPA Workshop for non-attainment area plans and SIP revisions in San Francisco.

14. Public Hearings and Meetings:

a. Public Hearings Held

Board of Health meeting, discussion of issuance of construction permit to Montana Power Company for Colstrip units 3 and 4.

b. Meetings Attended

Brand S and Riteway Asphalt, Helena, compliance orders issued to companies
Dept. of Natural Resources, Helena, proposed Northern Tier Pipeline
Peter Kiewit Sons, Helena, non-attainment designations
Office of Budget Programs, Helena, program modifications and budget amendments
TRW, Helena, permits for gas drilling operation
Stanford Research Institute, Helena, potential for new pulp mill
Anaconda Company, Helena, 1977 Clean Air Act Amendments
EPA, Helena, SIP revisions for designated non-attainment areas
Civil Engineering Technology Class, MSU, Bozeman, lectured on environmental rules and laws
Lewis & Clark County Health Department, Helena, requirements for setting up county air pollution control agency
Holly Sugar Corp., Helena, plans to modify controls and test beet pulp dryers
Exxon, Helena, Clean Air Act Amendments of 1977
Anaconda Company, Helena, plans for additional SO_2 control
Flathead River Basin Study Group, Polson
Commissioners, Kalispell, discuss experimental open burning period
U. S. Forest Service, Sandpoint, Idaho, herbicide spraying
Forest Services, Helena, smoke management plan
Data processing personnel, Helena, data acquisition system
MHD, Butte, acoustic radar chart reduction
State Airshed Group, Missoula
Lt. Governor, Helena, Poplar River
Highway Impact Evaluation Group, Helena, carrying capacity of Helena valley in terms of air pollution

14. Public Meetings, Cont.

Department of Highways, Helena, control of access along Montana roads and highways to reduce congestion and air pollution
EPA consultants, Helena, prepare handbook for local government officials so that they might mitigate the secondary efforts of energy-related development on air quality in small towns
Powder River Basin EIS, Helena
Water Quality 208 meeting, Helena
Burlington Northern, Helena, burning railroad ties
Ed Shepherd and Guylyn Warren, Helena, MAPS cancer study
MRI, Helena, contract for MAPS project
Historical Research Associates, Missoula, MAPS historical emission inventory
Fish and Game Department, smoke management

c. Intra-staff meetings

MAPS Project
MAAQS Project
Staff meetings
Billings O_3 designation, staff
Anaconda SO_2, staff
EPA inspections, staff
Sawmill waste disposal, staff

15. Public Information Requests:

Rules	12
Clean Air Act	4
General	7
Press Releases	6

16. None

17. Other:

Signed certification of compliance for Billings airport modification. This project involves lengthening one runway and associated changes.

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

February 1978

Pollutant: Misc. Indicators — Units:

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Sampl. of Data	Comments
	FLUORITE PAPER: mg/dm/30 days						
144	Anaconda South Flathead Co. Trailer -NAAC Flathead Co. Glacier Park #1 Glac.Natl Park	1.500	1.610	2.000	1.600	2	
	Glacier Park #2 Glac.Natl Park	0.760	0.760	0.780	0.380	2	
	Glacier Park #9 Glac.Natl Park	0.430	0.430	0.700	0.215	2	
		0.370	0.370	0.470	0.330	2	

Pollutant: Misc. Bubbler Data — Units: ppm

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Sampl. of Data	Comments
	SULFUR DIOXIDE						
140	Lockwood School Billings	----------	----------	-XXX-	----------	----------	----------
143	Scobey	0.0	0.0	0.0	0.0	2	
	Daniels Co.	0.0	0.0	0.0	0.0	2	
	Fort Peck McCone Co.	----------	----------	-XXX-	----------	----------	----------
	Lame Deer Rosebud Co.	----------	----------	-XX-	----------	----------	----------
	Bit. Site Colstrip						
	NITROGEN DIOXIDE						
143	Scobey	0.0	0.0	0.008	0.0	2	
	Daniels Co.	0.0	0.0	0.020	0.0	2	
	Fort Peck McCone Co.	----------	----------	-XXX-	----------	----------	----------
	Lame Deer Rosebud Co.	----------	----------	-XX-	----------	----------	----------
	BN Site Colstrip						

XX-Site no longer submitting data

Pollutant: Misc. Indicators — Units

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Sampl. of Data	Comments
	DUST FALL -tons/sq. mi.						
141	Mountain States Great Falls	10.02	10.02	80.64	6.09	2	
	Fire Sta #1 Great Falls	11.38	11.38	31.17	8.06	2	
	Fairgrounds Great Falls	----------	----------	-XXX-	----------	----------	----------
	SULFATION RATE - mg/100 sq. cm						
140	3/8 mi. NW Coop Billings	----------	----------	XXX-	----------	----------	----------
	East of Laurel Billings	----------	----------	XXX-	----------	----------	----------
	Hi-Ball Trucking Billings	----------	----------	XXX-	----------	----------	----------
141	Stock Car Track Great Falls	0.001	0.059	0.498	0.030	2	
	Phillips Pef #1 Great Falls	0.131	0.345	0.543	0.242	2	
	Phillips Ref #2 Great Falls	0.082	0.207	0.560	0.184	2	
142	Sierowave E. Helena	0.059	0.400	0.600	0.725	2	
	212 E. Pacific E. Helena	----------	----------	X---	----------	----------	----------
	East Block Sta. E. Helena	0.230	0.590	1.060	0.410	2	
	Brophy Ranch E. Helena	0.240	0.460	0.490	0.350	2	

Pollutant: TSP — Units: ug/cu meter

AQCR	Site Location	HIGH READING: Current Month	HIGH READING: Year-to-Date	HIGH READING: Running Year	ARITHMETIC AVER.: Year-to-Date	ARITHMETIC AVER.: No. of Sampl. of Data	Comments
140	Morton-Decker	55	209	209	69.0	2	
	Big Horn Co.	19	28	108	14.9	2	
	Warren Ranch Big Horn Co.	66	90	166	52.3	2	
	Lockwood School Billings	100	100	163	40.1	2	
	KMHL Billings	85	90	165	52.7	2	
	City Hall Billings	31	31	155	14.9	2	
	Grand Ave. Sch. Billings	51	68	150	40.1	2	
141	Laurel Jr. High Laurel	33	33	225	20.6	2	
	Hospital Roof Great Falls	107	107	177	56.9	2	
	Fire Sta #1 Great Falls	148	148	411	58.1	2	
	10th Ave. So. Great Falls	54	65	161	32.8	2	
142	HiWay Jct. Anaconda	81	81	217	39.1	2	
	McKinley Res Granite Co.	135	171	233	77.8	2	
	Greeley School Butte	139	139	297	67.9	2	
	Silmon Constr. Butte						

X - Sample lost - no data
XXX - Data unavailable at time of report

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

Monthly Summary of Air Quality Data

Pollutant: Total Suspended Particulate Units: ug/cubic meter

AQCR	AREA Site Location	HIGH READING Current Month	HIGH READING Year-to-Date	HIGH READING Running Year	ARITHMETIC AVER. Year-to-Date	ARITHMETIC AVER. No. of Mons. of Data	Comments
142	Adkins Residence Walkerville	50	50	107	36.3	2	
	Archer Res. Silv.Bow Co.	70	53	53	21.0	2	
	Tierney Res. Silv.Bow Co.	52	68	80	28.2	2	
	Microwave Jefferson Co.	32	52	101	27.2	2	
	212 E. Pacific Lewis &Cl. Co.	103	130	192	66.5	2	
	Kober Residence Three Forks	60	60	109	35.5	2	
143	Littlefield Hil Miles City	----------	----------	----X----	----------	----------	----------
	Glendive Dawson Co.	----------	----------	----------	----------	----------	----------
	Lane Deer Rosebud Co.	13	13	243	7.8	2	
	Fort Peck McCone Co.	13	13	88	6.5	2	
	Broadus Powder Riv.Co	15	18	275	8.1	2	
	BM Site Colstrip	----------	----------	----X----	----------	----------	----------
	Border Site Scobey	8	22	107	11.3	2	

X - No valid samples submitted.

Pollutant: Total Suspended Particulate Units: ug/cubic meter

AQCR	AREA Site Location	HIGH READING Current Month	HIGH READING Year-to-Date	HIGH READING Running Year	ARITHMETIC AVER. Year-to-Date	ARITHMETIC AVER. No. of Mons. of Data	Comments
144	Anders Res. Col. Falls	209	209	467	63.4	2	1 exc.Mt. Pr.St
	Courthouse Missoula	270	270	283	105.9	2	3 exc.Fed.Pri.St 6 exc.Fed.Sec.St
	Jn Field Missoula Co.	154	154	180	54.0	2	1 exc.Fed.Sec.St
	Kalispell Flathead Co.	143	143	226	46.4	2	
	Troy-Brown Lincoln Co.	120	120	171	48.8	2	
	Troy-Ramsden Lincoln Co.	29	29	171	12.9	2	
	Woerner-Wald.#1 Missoula Co.	144	144	255	46.0	2	
	Woerner-Wald #2 Missoula Co.	109	135	255	47.4	2	
	Woerner-Wald.#3 Missoula Co.	62	86	86	29.9	2	
	Courthouse Lawn Missoula	298	298	298	108.2	2	3 exc.Fed.Pri.St 7 exc.Fed.Sec.St
	Lion's Park Missoula	606	606	606	137.9	2	4 exc.Fed.Pri.St 4 exc.Fed.Sec.St
	Brown Residence Libby	394	394	394	107.4	2	1 exc.Fed.Pri.St 2 exc.Fed.Sec.St

Pollutant: Misc. Continuous Data Units: ppm

AQCR	AREA Site Location	HIGH READING Current Month	HIGH READING Year-to-Date	HIGH READING Running Year	ARITHMETIC AVER. Year-to-Date	ARITHMETIC AVER. No. of Mons. of Data	Comments
	Carbon Monoxide						
140	27th & Montana Billings	19.50	15.00	19.20	2.633	2	
141	10th Ave. South Great Falls	24.50	24.50	24.50	3.962	2	8 exc. Nat 8hr.
142	Alpine West Butte	11.50	12.50	14.00	1.608	2	
144	Malfunction Jct. Missoula	25.00	28.00	31.60	0.316	2	44 exc.Nat.8-hr.
	Lions Park Missoula	0.33	0.33	0.33	0.139	1	
	Hydrocarbons						
140	27th & Montana Billings	11.40	11.40	26.40	4.160	2	
144	Lions Park Missoula	5.00	5.00	7.62	2.186	2	
	Nitrogen Dioxid						
140	27th & Montana Billings	0.17	0.17	0.18	0.039	2	
142	Alpine West Butte	----------	----------	----XX----	----------	----------	----------
144	Lions Park Missoula	0.19	0.19	0.19	0.025	2	

XX - Site no longer submitting data

Pollutant: Misc. Continuous Data Units: ppm

AQCR	AREA Site Location	HIGH READING Current Month	HIGH READING Year-to-Date	HIGH READING Running Year	ARITHMETIC AVER. Year-to-Date	ARITHMETIC AVER. No. of Mons. of Data	Comments
	Ozone						
140	27th & Montana Billings	0.08	0.08	0.08	0.016	2	
144	Lions Park Missoula	0.05	0.05	0.05	0.009	2	
	Sulfur Dioxide						
140	27th & Montana Billings	0.00	0.17	0.20	0.003	2	
	Laurel Farm Billings	0.42	0.66	0.66	0.060	2	2 exc.Nat.24-hr.
142	Dant Stack E. Helena	0.20	0.34	0.66	0.009	2	1 exc.Mt.1-hr
	Microwave E. Helena	0.32	0.32	1.40	0.016	2	2 exc.Mt.1-hr
	Trendy Ranch E. Helena	0.49	0.00	0.00	0.023	2	4 exc.Mt.1-hr
	Hill Anaconda	2.43	2.43	3.51	0.024	2	1 exc.Nat.24-hr 2 exc.Nat.3-hr
	Hi-Way Jct. Anaconda	1.47	1.53	2.00	0.001	2	6 exc.Nat 24-hr 13 exc.Nat.3-hr
	Post Office Anaconda	0.67	0.67	1.05	0.019	2	3 exc. Mt.24-hr
	Mill Creek Anaconda	0.72	1.00	1.68	0.017	2	1 exc.Nat. 3-hr